

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Ozgur C. Leonard et al.

Application No.: 10/762,067

Confirmation No.: 4599

Filed: January 20, 2004

Art Unit: 2195

For: SYSTEM ACCOUNTING FOR OPERATING
SYSTEM PARTITIONS

Examiner: E. C. Wai

APPEAL BRIEF

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

As required under § 41.37(a), this brief is filed within two months of the Notice of Appeal filed in this case on December 2, 2009, and is in furtherance of said Notice of Appeal.

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I. REAL PARTY IN INTEREST

The real party in interest for this appeal is Sun Microsystems, Inc. An Assignment transferring all interest in the referenced application from the inventor to Sun Microsystems, Inc. was filed with the USPTO on January 20, 2004, at Reel 014922, Frame 0346.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

A. Total Number of Claims in Application

There are 36 claims pending in application.

B. Current Status of Claims

1. Claims canceled: 11, 20, 35
2. Claims pending: 1-10, 12-19, 21-34, and 36-39
3. Claims rejected: 1-10, 12-19, 21-34, and 36-39

C. Claims On Appeal

The claims on appeal are claims 1-10, 12-19, 21-34, and 36-39

IV. STATUS OF AMENDMENTS

All of the amendments have been entered and considered by the Examiner. No amendments have been filed subsequent to the Final Rejection. The claims of record are presented in the Claims Appendix.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The following discussion summarizes the content of the claimed subject matter. The references to the Figures and Specification below should not be construed as the only locations in the Specification which support or discussion of the respective limitation.

Independent claim 1 relates to a machine-implemented method (*see e.g.*, Specification, at least page 22, lines 15-23 and page 23, lines 3-18) comprising, in response to an ending of execution of a first process that executed in a first virtual operating system environment (VOSE) of a plurality of VOSEs controlled by a single operating system kernel instance (*see e.g.*, Specification, page 14, lines 3-8 and page 22, lines 7-8), a processor determining in which VOSE of the plurality of VOSEs the first process executed (*see e.g.*, Specification, at least page 10, lines 22-24 and Figure 2, Step 202 and Figure 4, element 404), wherein each VOSE of the plurality of VOSEs comprises a partition of a global file system (*see e.g.*, Specification, at least page 7, lines 22-23, page 13, lines 18-19 and Figure 1, elements 180a, 180b); and in response to the processor determining that the first process executed in the first VOSE (*see e.g.*, Specification, at least page 15, lines 12-14), recording, in a first system accounting log file (SALF) stored in a first file system partition associated with the first VOSE, first accounting information about the first process (*see e.g.*, Specification, at least page 10, lines 24-25, page 19, lines 10-21, page 25, lines 1-3, and Figure 2, Step 204).

Independent claim 13 relates to a volatile or non-volatile machine-readable storage medium (*see e.g.*, Specification, at least page 22, lines 15-23 and page 23, lines 3-18), comprising instructions for causing one or more processors to determine, in response to an ending of execution of a first process that executed in a first virtual operating system environment (VOSE) of a plurality

of VOSEs controlled by a single operating system kernel instance (*see e.g.*, Specification, page 14, lines 3-8 and page 22, lines 7-8), in which VOSE of the plurality of VOSEs the first process executed (*see e.g.*, Specification, at least page 10, lines 22-24 and Figure 2, Step 202 and Figure 4, element 404), wherein each VOSE of the plurality of VOSEs comprises a partition of a global file system (*see e.g.*, Specification, at least page 7, lines 22-23, page 13, lines 18-19 and Figure 1, elements 180a, 180b); and instructions for causing one or more processors to record, in response to determining that the first process executed in the first VOSE (*see e.g.*, Specification, at least page 15, lines 12-14), in a first system accounting log file (SALF) stored in a first file system partition associated with the first VOSE, first accounting information about the first process (*see e.g.*, Specification, at least page 10, lines 24-25, page 19, lines 10-21, page 25, lines 1-3, and Figure 2, Step 204).

Independent claim 25 relates to an apparatus (*see e.g.*, Specification, Figure 1), comprising a processor mechanism (*see e.g.*, Specification, at least Figure 4, element 404) for determining, in response to an ending of execution of a first process that executed in a first virtual operating system environment (VOSE) of a plurality of VOSEs controlled by a single operating system kernel instance (*see e.g.*, Specification, page 14, lines 3-8 and page 22, lines 7-8), in which VOSE of the plurality of VOSEs the first process executed (*see e.g.*, Specification, at least page 10, lines 22-24 and Figure 2, Step 202 and Figure 4, element 404), wherein each VOSE of the plurality of VOSEs comprises a partition of a global file system (*see e.g.*, Specification, at least page 7, lines 22-23, page 13, lines 18-19 and Figure 1, elements 180a, 180b); and a memory mechanism (*see e.g.*, Specification at least Figure 4, element 406) for recording, in response to determining that the first process executed in the first VOSE, in a first system accounting log file (SALF) stored in a first file

system partition associated with the first VOSE, first accounting information about the first process (see e.g., Specification, at least page 10, lines 24-25, page 19, lines 10-21, page 25, lines 1-3, Figure 2, Step 204, and Figure 4, element 406).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1-10, 12-19, 21-34, and 36-39 are patentable under 35 U.S.C. § 103(a) over US Pat. No. 7,194,439 (“Kassan”) in view of US Publ. No. 2002/0156824 (“Armstrong”), and further in view of US Publ. No. 2005/0076326 (“McMillan”).

VII. ARGUMENT

A. Claims 1-10, 12-19, 21-34, and 36-39 are patentable over Kassan, Armstrong, and McMillan

In this Appeal, Appellants argue that claims 1-10, 12-19, 21-34, and 36-39 are patentable over Kassan in view of Armstrong, and further in view of McMillan, for at least the reasons given below.

For the purposes of this Appeal, claims 1-10, 12-19, 21-34, and 36-39 stand or fall together. Independent claim 1 is representative of the group including claims 1-10, 12-19, 21-34, and 36-39.

To establish a *prima facie* case of obviousness under *KSR Int’l v. Teleflex Inc.*, 127 S.Ct. 1727, 1741 (2007), when combining prior art elements, the Examiner “must articulate the following: (1) a finding that the prior art included each element claimed, although not necessarily in a single prior art reference, with the only difference between the claimed invention and the prior art being the lack of actual combination of the elements in a single prior art reference....” MPEP § 2143(A).

“To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.” *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). *See* MPEP § 706.02(j). Appellants respectfully assert that the Examiner has failed to do so.

If the Examiner does not produce a *prima facie* case, Applicant is under no obligation to submit evidence of non-obviousness. The initial evaluation of *prima facie* obviousness thus relieves both the Examiner and Applicant from evaluating evidence beyond the prior art and the evidence in the specification as filed until the art has been shown to suggest the claimed invention. *See In re Piasecki*, 745 F.2d 1468, 223 USPQ 785 (Fed. Cir. 1984) and MPEP § 2142.

1. Armstrong fails to disclose or render obvious the controlling of several VOSEs by a single OS Kernel instance

The independent claims require, in part, (i) a plurality of virtual operating system environments (VOSEs) controlled by a single operating system kernel instance. The Examiner admits on page 3 of the Final Office Action that Kassan fails to disclose or render obvious that the plurality of VOSEs are controlled by a single OS kernel instance. However, the Examiner relies on Armstrong as disclosing this limitation. The Examiner asserts that the hypervisor of Armstrong is equivalent to a single kernel instance, and thus, that Armstrong provides the controlling of several VOSEs by a single OS kernel instance. Appellants disagree with the Examiner's assertion.

Specifically, Armstrong is directed to allocating processor resources in a logically partitioned computer system. *See* Armstrong, Abstract. In particular, the cited portion of Armstrong discloses:

[I]t is possible to alter the logical configuration of a logically partitioned computer system, to change the number of logical partitions or re-assign resources to different partitions, without reconfiguring hardware. Generally, a logical partition management tool is provided for this purpose. This management tool is intended for use by a single or a small group of authorized users, who are herein designated the system administrator. In the preferred embodiment described herein, this management tool is referred to as the "hypervisor". *See* Armstrong paragraph [0025] and [0035].

Thus, the hypervisor is clearly only used to change the number of partitions and/or the re-assign resources to different partitions. In contrast, the claimed invention requires that a single OS kernel executes a plurality of isolated execution environments (VOSEs).

Moreover, while the hypervisor may include OS functionality, the hypervisor itself is not partitioned to such that there are multiple isolated execution environments within the hypervisor. Rather, the hypervisor is a single OS instance (represented as a distinct OS Kernel in Fig. 2 of Armstrong) and which interfaces with other distinct OS Kernels (*e.g.*, 204B, 204C, 204D). Further, the hypervisor does not control all of the computer system partitions; rather, as described in Armstrong, the hypervisor merely acts as a *management tool* for resources for the partitions and the number of partitions. In view of the above, the system architecture of Armstrong is clearly not equivalent to the claimed system architecture, which requires a plurality of VOSEs to execute on a single kernel (*see e.g.*, Originally Filed Drawings, Fig. 1).

Accordingly, Armstrong fails to supply that which Kassan lacks, and does not disclose (i) as required above.

2. McMillan fails to disclose or render obvious file system partitions

The claimed invention also requires, in part, (ii) wherein each VOSE comprises one partition of a global file system; and (iii) a first system accounting log file (SALF) stored in a first file system partition associated with the first VOSE. That is, the claimed invention requires a global file system (*e.g.*, 180 in Figure 1) that is partitioned (*e.g.*, 180a, 180b in Figure 1) and one partition of the file system is associated with each VOSE. A file system partition is completely separate and distinct from a VOSE. *See* Specification, pages 6-7 and Figure 1. The global file system is executed by the global operating system, and is responsible for managing and storing files. Appellants respectfully assert that none of the cited prior art references disclose or render obvious a VOSE that comprises a partition of a global file system, where the accounting information for each process executed in the VOSE is stored in the corresponding file system partition.

Specifically, the Examiner admits that Kassan fails to disclose the aforementioned limitations required by (ii) and (iii). *See* final Office Action, page 4. However, the Examiner relies on McMillan as disclosing the aforementioned limitations. However, this is clearly incorrect, as the Examiner's reasoning and interpretation of McMillan are flawed.

As quoted by the Examiner, McMillan states that separate file systems are used for each of a semi-independent virtual OA environment operating within the scope of a main OS. *See* McMillan, paragraph [0008]. Individual *complete* file systems are clearly distinct from file system *partitions* of a single global file system. In fact, McMillan is completely silent with respect to partitions of a global file system.

Moreover, it logically follows from the above that none of the cited references can possibly disclose or render obvious the storing of a system accounting log file (SALF) in a first file system

partition associated with the first VOSE, because none of the cited references disclose or render obvious a first file system partition executing on a first of a plurality of VOSEs.

Accordingly, McMillan fails to disclose or otherwise provide (ii) and (iii) as required above.

VIII. CONCLUSION

In view of the above, the Examiner's contentions and the cited prior art references do not support an obviousness rejection of claims 1-10, 12-19, 21-34, and 36-39 under 35 U.S.C. § 103(a). Further, because the Examiner has failed to show sufficient evidence to establish a *prima facie* case of obviousness, the Appellants have carried their burden in showing that the Examiner erred in finally rejecting the claims. *In re Kahn*, 441 F.3d 977, 985-986 (Fed. Cir. 2006) ("On appeal to the Board, an applicant can overcome a rejection by showing insufficient evidence of *prima facie* obviousness or by rebutting the *prima facie* case with evidence of secondary indicia of nonobviousness") (emphasis in original) (quoting *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998)); see also 37 C.F.R. § 41.37(c)(1)(vii). Favorable consideration of the appeal is respectfully requested.

Dated: February 2, 2010

Respectfully submitted,

By /Robert P. Lord/
Robert P. Lord
Registration No.: 46,479
OSHA · LIANG LLP
909 Fannin Street, Suite 3500
Houston, Texas 77010
(713) 228-8600
(713) 228-8778 (Fax)

CLAIMS APPENDIX

Claims Involved in the Appeal of Application Serial No. 10/762,067

1. A machine-implemented method, comprising:

in response to an ending of execution of a first process that executed in a first virtual operating system environment (VOSE) of a plurality of VOSEs controlled by a single operating system kernel instance, a processor determining in which VOSE of the plurality of VOSEs the first process executed,

wherein each VOSE of the plurality of VOSEs comprises a partition of a global file system; and

in response to the processor determining that the first process executed in the first VOSE, recording, in a first system accounting log file (SALF) stored in a first file system partition associated with the first VOSE, first accounting information about the first process.

2. The method of claim 1, further comprising:

in response to determining that the first process executed in the first VOSE, determining, based on first accounting settings that are associated with the first VOSE, one or more specified accounting information aspects of a plurality of accounting information aspects;

wherein recording the first accounting information comprises recording aspects of accounting information that correspond to the one or more specified accounting information aspects.

3. The method of claim 2, further comprising:

in response to an invocation of an accounting settings updating function by a second process that is executing in the first VOSE, determining in which VOSE of the plurality of VOSEs the second process is executing; and

in response to determining that the second process is executing in the first VOSE, updating the first accounting settings;

wherein the accounting settings updating function is implemented by the operating system kernel instance.

4. The method of claim 3, wherein processes that do not execute in the first VOSE are prevented from updating the first accounting settings.
5. The method of claim 1, wherein the first SALF is not accessible by any processes that execute in any VOSE other than the first VOSE.
6. The method of claim 1, further comprising:
 - in response to an ending of execution of a second process that executed in a second VOSE of the plurality of VOSEs, determining in which VOSE of the plurality of VOSEs the second process executed; and
 - in response to determining that the second process executed in the second VOSE, recording, in a second SALF stored in a second file system partition associated with the second VOSE, second accounting information about the second process;
 - wherein the first VOSE is separate from the second VOSE.
7. The method of claim 6, further comprising:
 - in response to determining that the first process executed in the first VOSE, determining, based on first accounting settings that are associated with the first VOSE, one or more first specified accounting information aspects of a plurality of accounting information aspects; and
 - in response to determining that the second process executed in the second VOSE, determining, based on second accounting settings that are associated with the second VOSE, one or more second specified accounting information aspects of the plurality of accounting information aspects;

wherein recording the first accounting information comprises recording aspects of accounting information that correspond to the one or more first specified accounting information aspects;

wherein recording the second accounting information comprises recording aspects of accounting information that correspond to the one or more second specified accounting information aspects; and

wherein the one or more first specified accounting information aspects are separate from the one or more second specified accounting information aspects.

8. The method of claim 7, further comprising:

in response to an invocation of an accounting settings updating function by a third process that is executing in the first VOSE, determining in which VOSE of the plurality of VOSEs the third process is executing;

in response to determining that the third process is executing in the first VOSE, updating the first accounting settings;

in response to an invocation of the accounting settings updating function by a fourth process that is executing in the second VOSE, determining in which VOSE of the plurality of VOSEs the fourth process is executing; and

in response to determining that the fourth process is executing in the second VOSE, updating the second accounting settings;

wherein the accounting settings updating function is implemented by the operating system kernel instance; and

wherein the first accounting settings are separate from the second accounting settings.

9. The method of claim 1, further comprising:

in response to the ending of execution of the first process, recording, in a second SALF stored in a file system that is associated with a global operating system environment (OSE) that comprises the plurality of VOSEs, second accounting information about the first process;

wherein the second SALF is separate from the first SALF.

10. The method of claim 9, further comprising:

in response to determining that the first process executed in the first VOSE, determining, based on first accounting settings that are associated with the first VOSE, one or more first specified accounting information aspects of a plurality of accounting information aspects; and

determining, based on second accounting settings that are associated with the global OSE, one or more second specified accounting information aspects of the plurality of accounting information aspects;

wherein recording the first accounting information comprises recording aspects of accounting information that correspond to the one or more first specified accounting information aspects;

wherein recording the second accounting information comprises recording aspects of accounting information that correspond to the one or more second specified accounting information aspects;

wherein the one or more first specified accounting information aspects are separate from the one or more second specified accounting information aspects;

in response to an invocation of an accounting settings updating function by a second process that is executing in the first VOSE, determining in which of the global OSE and the plurality of VOSEs the second process is executing;

in response to determining that the second process is executing in the first VOSE, updating the first accounting settings;

in response to an invocation of the accounting settings updating function by a third process that is executing in the global OSE, determining in which of the global OSE and the plurality of VOSEs the third process is executing; and

in response to determining that the third process is executing in the global OSE, updating the second accounting settings;

wherein the first accounting settings are separate from the second accounting settings; and

wherein the accounting settings updating function is implemented by the operating system kernel instance.

11. (Canceled)

12. The method of claim 9, wherein the second accounting information indicates an identity of a VOSE in which the first process executed.

13. A volatile or non-volatile machine-readable storage medium, comprising:

instructions for causing one or more processors to determine, in response to an ending of execution of a first process that executed in a first virtual operating system environment (VOSE) of a plurality of VOSEs controlled by a single operating system kernel instance, in which VOSE of the plurality of VOSEs the first process executed

wherein each VOSE of the plurality of VOSEs comprises a partition of a global file system; and

instructions for causing one or more processors to record, in response to determining that the first process executed in the first VOSE, in a first system accounting log file (SALF) stored in a first file system partition associated with the first VOSE, first accounting information about the first process.

14. The volatile or non-volatile machine-readable storage medium of claim 13, further comprising:

instructions for causing one or more processors to determine, based on first accounting settings that are associated with the first VOSE, in response to determining that the first process executed in the first VOSE, one or more specified accounting information aspects of a plurality of accounting information aspects;

wherein the instructions for causing one or more processors to record the first accounting information comprise instructions for causing one or more processors to record aspects of accounting information that correspond to the one or more specified accounting information aspects.

15. The volatile or non-volatile machine-readable storage medium of claim 14, further comprising:

instructions for causing one or more processors to determine, in response to an invocation of an accounting settings updating function by a second process that is executing in the

- first VOSE, in which VOSE of the plurality of VOSEs the second process is executing; and
- instructions for causing one or more processors to update, in response to determining that the second process is executing in the first VOSE, the first accounting settings;
- wherein the accounting settings updating function is implemented by the operating system kernel instance.
16. The volatile or non-volatile machine-readable storage medium of claim 15, wherein processes that do not execute in the first VOSE are prevented from updating the first accounting settings.
17. The volatile or non-volatile machine-readable storage medium of claim 13, wherein the first SALF is not accessible by any processes that execute in any VOSE other than the first VOSE.
18. The volatile or non-volatile machine-readable storage medium of claim 13, further comprising:
- instructions for causing one or more processors to determine, in response to an ending of execution of a second process that executed in a second VOSE of the plurality of VOSEs, in which VOSE of the plurality of VOSEs the second process executed; and
- instructions for causing one or more processors to record, in response to determining that the second process executed in the second VOSE, in a second SALF stored in a second file system partition associated with the second VOSE, second accounting information about the second process;
- wherein the first VOSE is separate from the second VOSE.

19. The volatile or non-volatile machine-readable storage medium of claim 18, further comprising:

instructions for causing one or more processors to determine, based on first accounting settings that are associated with the first VOSE, in response to determining that the first process executed in the first VOSE, one or more first specified accounting information aspects of a plurality of accounting information aspects; and

instructions for causing one or more processors to determine, based on second accounting settings that are associated with the second VOSE, in response to determining that the second process executed in the second VOSE, one or more second specified accounting information aspects of the plurality of accounting information aspects;

wherein the instructions for causing one or more processors to record the first accounting information comprise instructions for causing one or more processors to record aspects of accounting information that correspond to the one or more first specified accounting information aspects;

wherein the instructions for causing one or more processors to record the second accounting information comprise instructions for causing one or more processors to record aspects of accounting information that correspond to the one or more second specified accounting information aspects;

wherein the one or more first specified accounting information aspects are separate from the one or more second specified accounting information aspects;

instructions for causing one or more processors to determine, in response to an invocation of an accounting settings updating function by third process that is executing in the first VOSE, in which VOSE of the plurality of VOSEs the third process is executing;

instructions for causing one or more processors to update, in response to determining that the third process is executing in the first VOSE, the first accounting settings;

instructions for causing one or more processors to determine, in response to an invocation of the accounting settings updating function by a fourth process that is executing in the second VOSE, in which VOSE of the plurality of VOSEs the fourth process is executing; and

instructions for causing one or more processors to update, in response to determining that the fourth process is executing in the second VOSE, the second accounting settings; wherein the accounting settings updating function is implemented by the operating system kernel instance; and wherein the first accounting settings are separate from the second accounting settings.

20. (Canceled)

21. The volatile or non-volatile machine-readable storage medium of claim 13, further comprising: instructions for causing one or more processors to record, in response to the ending of execution of the first process, in a second SALF stored in a file system that is associated with a global operating system environment (OSE) that comprises the plurality of VOSEs, second accounting information about the first process; wherein the second SALF is separate from the first SALF.

22. The volatile or non-volatile machine-readable storage medium of claim 21, further comprising: instructions for causing one or more processors to determine, based on first accounting settings that are associated with the first VOSE, in response to determining that the first process executed in the first VOSE, one or more first specified accounting information aspects of a plurality of accounting information aspects; and instructions for causing one or more processors to determine, based on second accounting settings that are associated with the global OSE, one or more second specified accounting information aspects of the plurality of accounting information aspects; wherein the instructions for causing one or more processors to record the first accounting information comprise instructions for causing one or more processors to record aspects of accounting information that correspond to the one or more first specified accounting information aspects; wherein the instructions for causing one or more processors to record the second accounting information comprise instructions for causing one or more processors to record

aspects of accounting information that correspond to the one or more second specified accounting information aspects; and

wherein the one or more first specified accounting information aspects are separate from the one or more second specified accounting information aspects.

23. The volatile or non-volatile machine-readable storage medium of claim 22, further comprising:
- instructions for causing one or more processors to determine, in response to an invocation of an accounting settings updating function by a second process that is executing in the first VOSE, in which of the global OSE and the plurality of VOSEs the second process is executing;
 - instructions for causing one or more processors to update, in response to determining that the second process is executing in the first VOSE, the first accounting settings;
 - instructions for causing one or more processors to determine, in response to an invocation of the accounting settings updating function by a third process that is executing in the global OSE, in which of the global OSE and the plurality of VOSEs the third process is executing; and
 - instructions for causing one or more processors to update, in response to determining that the third process is executing in the global OSE, the second accounting settings;
- wherein the first accounting settings are separate from the second accounting settings; and wherein the accounting settings updating function is implemented by the operating system kernel instance.
24. The volatile or non-volatile machine-readable storage medium of claim 21, wherein the second accounting information indicates an identity of a VOSE in which the first process executed.

25. An apparatus, comprising:

- a processor mechanism for determining, in response to an ending of execution of a first process that executed in a first virtual operating system environment (VOSE) of a plurality of VOSEs controlled by a single operating system kernel instance, in which VOSE of the plurality of VOSEs the first process executed
- wherein each VOSE of the plurality of VOSEs comprises a partition of a global file system; and
- a memory mechanism for recording, in response to determining that the first process executed in the first VOSE, in a first system accounting log file (SALF) stored in a first file system partition associated with the first VOSE, first accounting information about the first process.

26. The apparatus of claim 25, further comprising:

- a mechanism for determining, based on first accounting settings that are associated with the first VOSE, in response to determining that the first process executed in the first VOSE, one or more specified accounting information aspects of a plurality of accounting information aspects;
- wherein the mechanism for recording the first accounting information comprises a mechanism for recording aspects of accounting information that correspond to the one or more specified accounting information aspects.

27. The apparatus of claim 26, further comprising:

- a mechanism for determining, in response to an invocation of an accounting settings updating function by a second process that is executing in the first VOSE, in which VOSE of the plurality of VOSEs the second process is executing; and
- a mechanism for updating, in response to determining that the second process is executing in the first VOSE, the first accounting settings;
- wherein the accounting settings updating function is implemented by the operating system kernel instance.

28. The apparatus of claim 27, wherein processes that do not execute in the first VOSE are prevented from updating the first accounting settings.
29. The apparatus of claim 25, wherein the first SALF is not accessible by any processes that execute in any VOSE other than the first VOSE.
30. The apparatus of claim 25, further comprising:
- a mechanism for determining, in response to an ending of execution of a second process that executed in a second VOSE of the plurality of VOSEs, in which VOSE of the plurality of VOSEs the second process executed; and
 - a mechanism for recording, in response to determining that the second process executed in the second VOSE, in a second SALF stored in a second file system partition associated with the second VOSE, second accounting information about the second process;
- wherein the first VOSE is separate from the second VOSE.
31. The apparatus of claim 30, further comprising:
- a mechanism for determining, based on first accounting settings that are associated with the first VOSE, in response to determining that the first process executed in the first VOSE, determining one or more first specified accounting information aspects of a plurality of accounting information aspects; and
 - a mechanism for determining, based on second accounting settings that are associated with the second VOSE, in response to determining that the second process executed in the second VOSE, one or more second specified accounting information aspects of the plurality of accounting information aspects;
- wherein the mechanism for recording the first accounting information comprises a mechanism for recording aspects of accounting information that correspond to the one or more first specified accounting information aspects;

wherein the mechanism for recording the second accounting information comprises a mechanism for recording aspects of accounting information that correspond to the one or more second specified accounting information aspects; and wherein the one or more first specified accounting information aspects are separate from the one or more second specified accounting information aspects.

32. The apparatus of claim 31, further comprising:

- a mechanism for determining, in response to an invocation of an accounting settings updating function by a third process that is executing in the first VOSE, in which VOSE of the plurality of VOSEs the third process is executing;
 - a mechanism for updating, in response to determining that the third process is executing in the first VOSE, the first accounting settings;
 - a mechanism for determining, in response to an invocation of the accounting settings updating function by a fourth process that is executing in the second VOSE, in which VOSE of the plurality of VOSEs the fourth process is executing; and
 - a mechanism for updating, in response to determining that the fourth process is executing in the second VOSE, the second accounting settings;
- wherein the accounting settings updating function is implemented by the operating system kernel instance; and
- wherein the first accounting settings are separate from the second accounting settings.

33. The apparatus of claim 25, further comprising:

- a mechanism for recording, in response to the ending of execution of the first process, in a second SALF stored in a file system that is associated with a global operating system environment (OSE) that comprises the plurality of VOSEs, second accounting information about the first process;
- wherein the second SALF is separate from the first SALF.

34. The apparatus of claim 33, further comprising:

- a mechanism for determining, based on first accounting settings that are associated with the first VOSE, in response to determining that the first process executed in the first VOSE, one or more first specified accounting information aspects of a plurality of accounting information aspects; and

a mechanism for determining, based on second accounting settings that are associated with the global OSE, one or more second specified accounting information aspects of the plurality of accounting information aspects;

wherein the mechanism for recording the first accounting information comprises a mechanism for recording aspects of accounting information that correspond to the one or more first specified accounting information aspects;

wherein the mechanism for recording the second accounting information comprises a mechanism for recording aspects of accounting information that correspond to the one or more second specified accounting information aspects;

wherein the one or more first specified accounting information aspects are separate from the one or more second specified accounting information aspects;

a mechanism for updating, in response to an invocation of an accounting settings updating function by a second process that is executing in the first VOSE. In which of the global OSE and the plurality of VOSEs the second process is executing;

a mechanism for updating, in response to determining that the second process is executing in the first VOSE. the first accounting settings;

a mechanism for determining, in response to an invocation of the accounting settings updating function by a third process that is executing in the global OSE. In which of the global OSE and the plurality of VOSEs the third process is executing; and

a mechanism for updating, in response to determining that the third process is executing in the global OSE, the second accounting settings;

wherein the first accounting settings are separate from the second accounting settings; and

wherein the accounting settings updating function is implemented by the operating system kernel instance.

35. (Canceled)

36. The apparatus of claim 33, wherein the second accounting information indicates an identity of a VOSE in which the first process executed.

37. The method of claim 1, wherein the operating system kernel instance exists in a global zone that contains the plurality of VOSEs, and wherein the operating system kernel instance determines in which VOSE of the plurality of VOSES the first process executed in response to the first process invoking an exit function of the operating system kernel instance.
38. The volatile or non-volatile machine-readable storage medium of claim 13, wherein the operating system kernel instance exists in a global zone that contains the plurality of VOSEs, and wherein the operating system kernel instance determines in which VOSE of the plurality of VOSES the first process executed in response to the first process invoking an exit function of the operating system kernel instance.
39. The apparatus of claim 25, wherein the operating system kernel instance exists in a global zone that contains the plurality of VOSEs, and wherein the operating system kernel instance determines in which VOSE of the plurality of VOSES the first process executed in response to the first process invoking an exit function of the operating system kernel instance.

EVIDENCE APPENDIX

No evidence pursuant to §§ 1.130, 1.131, or 1.132 or entered by or relied upon by the examiner is being submitted.

RELATED PROCEEDINGS APPENDIX

No related proceedings are referenced in II. above, hence copies of decisions in related proceedings are not provided.